

PRASHANT PRASAD KANTH

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EDUCATION

MSc, Computer Science Rutgers University-New Brunswick (CGPA: 4.0)	Sep 2021 - May 2023
BE, Computer Science and Engineering Bangalore Institute of Technology (Percent: 77)	Aug 2013 - Jun 2017
Relevant Courses: DBMS, Data Structures and Algorithms, Artificial Intelligence, Computer Vision, Massive Data Storage	

PROFESSIONAL EXPERIENCE

Artrendex New Jersey, US	Jun 2022 – Sep 2022
<i>Machine Learning Research Intern (stack: Python, PyTorch, OpenCV, Tensorboard, Numpy, Pandas, skimage)</i>	
<ul style="list-style-type: none">Improved reusability of data pipeline by generalising pre-processing and overriding PyTorch's Dataset class to reduce manual labor by 10%Performed transfer learning on deep learning models like VGG and achieved 94% test accuracy on art classificationResearched on positional encoding options and explored 3D CNN variation of Resnet, 'R3D-18', for art classification	
Rutgers University New Jersey, US	Feb 2022 - May 2022
<i>Teaching Assistant (Discrete Mathematics)</i>	
<ul style="list-style-type: none">Tutored a class of 50 students on concepts of combinatorics and probability	
Oracle Bangalore, India	Jul 2017 - Jun 2021
<i>Cloud Consultant (stack: Oracle SQL, Relational Databases, Java, Oracle BI, MS Excel, XML)</i>	
<ul style="list-style-type: none">Lead integration and report development track from planning phase to production deploymentDeveloped 50+ SQL reports to be used in client's production environment for ETL operationsRemodelled Java automation program by integrating with REST APIs to bring down manual effort data migration by 20%Built "Text2File Generator" using Java Swing/AWT, reducing data migration time by almost 75%Conducted training sessions for 40+ new hires	

PROJECTS

Patient Monitoring using Activity Recognition (stack: PyTorch, Keras, OpenCV, Mediapipe, Unity3D)	Oct 2022 - Nov 2022
<ul style="list-style-type: none">Trained CNN-LSTM and LSTM models to monitor patient's daily activities and generate activity distribution reportCreated synthetic data, 50000 frames, for 6 different activities using Unity3D and leveraged mediapipe framework to extract 33 body keypoints for each frame as initial featuresExperimented with pose-normalized distances between 18 pairs of selected keypoints as additional features to achieve 82.4% test classification accuracy on real-world activity videos	
Text-Conditional Image Generation (stack: Python, PyTorch, Hugging Face, OpenCV, NumPy)	Oct 2022 - Nov 2022
<ul style="list-style-type: none">Modelled and trained a Deep Convolutional GAN to generate 256x256 images using text captions as inputEmployed 3 text encoders (DistilBERT, CLIP and char-CNN-RNN) to obtain text embeddings and compared their resultsImproved model training by using 3 different methods: Label Smoothing, Label Noise and Wasserstein-Gradient Penalty	
Querying on Streaming Data (stack: Python, Apache Spark, boto3, matplotlib)	Oct 2022 - Nov 2022
<ul style="list-style-type: none">Reduced 30% pre-processing time on approx. 130GB (40M records) of data using MapReduce and saved significant storage space by writing data into parquet formatDesigned a pipeline using Apache Spark in python to consume streaming data and provide real-time visualization on top scholarly works using matplotlib animation	
The Imitation Game (stack: Python, Keras, NumPy, Pandas, matplotlib)	Oct 2021 - Nov 2021
<ul style="list-style-type: none">Collected training data, 5x5 grid of environment with agent's current position as centre, from 3-different implementations of maze runner using repeated A-star algorithmAchieved 98% and 99% test accuracy with ANN and CNN respectively to mimic an agent's movement in maze.	

TECHNICAL SKILLS

Languages: Python, SQL, Java, R, MATLAB, C, C++, HTML, JavaScript Operating Systems: Windows, Linux, MacOS
IDEs: VS Code, Jupyter Notebook, Spyder Frameworks and Tools: PyTorch, sklearn, skimage, OpenCV, HuggingFace, NumPy, Pandas, PySpark, Matplotlib, Mediapipe, Git

CERTIFICATIONS

• Introduction to NoSQL Databases – Coursera IBM	Sep 2022
• Machine Learning - authorized by Stanford online and offered through Coursera	Jun 2022
• Oracle Database SQL Certified Associate	Jul 2020
• Oracle Cloud Infrastructure Foundations Certified Associate	Jul 2020